

CLAIMS

1) A machine for filling containers (2); the machine comprising a carousel conveyor (5) having a vertical axis (6), and in turn comprising a number of filling heads (7), and an equal number of seats (8), each of which houses a respective container (2), is associated with a respective filling head (7), and is connected to the carousel conveyor (5) via the interposition of a weighing device (9) supported in a fixed position by the carousel conveyor (5); each seat (8) comprising a frame (10), a gripper (11) fitted to the frame (10) and for engaging a top portion (4) of a respective container (2), and a plate (12) fitted to the frame (10) and defining a horizontal supporting surface for the bottom of the respective container (2); the machine (1) being characterized in that each seat (8) comprises an adjusting device (13) associated with the respective frame (10) and for adjusting the vertical position of the plate (12), while maintaining the gripper (11) in a given vertical position close to the corresponding filling head (7).

2) A machine as claimed in Claim 1, characterized in that each frame (10) comprises a fixed supporting member (17) connected rigidly to the corresponding weighing device (9), and supporting the relative gripper (11) in a fixed position, and the relative plate (12) in an adjustable position.

3) A machine as claimed in Claim 2, characterized in that the supporting member (17) comprises a vertical rod (18), along which the plate (12) slides; releasable connecting means (19) being provided to connect the plate
5 (12) to the vertical rod (18).

4) A machine as claimed in Claim 3, characterized in that the vertical rod (18) comprises an L-shaped top end (20) connected by screws to the rest of supporting member (17).

10 5) A machine as claimed in Claim 3 or 4, characterized in that the releasable connecting means (19) comprise a horizontally movable key (21) fitted to the plate (12), and a number of holes (22), each formed along the vertical rod (18) and engageable by the key
15 (21).

6) A machine as claimed in Claim 5, characterized in that the key (21) comprises a spring for keeping the key (21) in an engaged position inside a respective hole (22), and an operator grip (23) on one end of the key
20 (21).

7) A machine as claimed in Claim 2, characterized in that each frame (10) comprises a vertical telescopic supporting member (24), which has a fixed portion (25) connected rigidly to the corresponding weighing device
25 (9), and a vertically movable portion (26) supporting the relative plate (12) in a fixed position, and the relative gripper (11) in an adjustable position; first releasable connecting means (27) being provided to connect the fixed

portion (25) of the telescopic supporting member (24) to the movable portion (26).

8) A machine as claimed in Claim 7, characterized in that the plate (12) supports in sliding manner a vertical rod (31) supporting the gripper (11) in a fixed position; second releasable connecting means (32) being provided to connect the vertical rod (31) to the plate (12).

9) A machine as claimed in Claim 8, characterized in that the second releasable connecting means (32) comprise a horizontally movable key (33) fitted to the plate (12), and a number of holes (34), each formed along the vertical rod (31) and engageable by the key (33).

10) A machine as claimed in Claim 9, characterized in that the key (33) comprises a spring for keeping the key (33) in an engaged position inside a respective hole (34), and an operator grip (35) on one end of the key (33).

11) A machine as claimed in one of Claims 1 to 10, characterized in that each gripper (11) comprises two jaws (14) hinged to the respective frame (10) to oscillate about respective vertical axes (15); and an elastic member (16), which tends to keep the jaws (14) in an engaged position engaging the top portion (4) of a respective container (2).

12) A machine as claimed in one of Claims 1 to 11, characterized in that each weighing device (9) comprises an articulated parallelogram (36) defined by two rocker arms (37) hinged at one end to the carousel conveyor (5),

and at the other end to a connecting rod (38) supporting the relative frame (10); a load cell (39) being connected on one side to the carousel conveyor (5), and on the other side to the connecting rod (38).

- 5 13) A machine as claimed in Claim 12, characterized in that the load cell (39) is connected to the connecting rod (38) by a spherical bowl-shaped projection (40), which engages a horizontal projection (41) on the connecting rod (38) and forms a substantially point
10 contact between the load cell (39) and the connecting rod (38).